

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 8, 17 and 30 are canceled.

Claims 1, 10-16, 18-19 are amended.

Claims 31-37 are new.

1. (Amended) A method of forming a microarray of discrete polypeptide regions of claim 31 on a solid support, where each discrete region in the microarray has a selected polypeptide of at least 50 amino acids in length, said method comprising,

(a) loading an aqueous solution of a selected polypeptide of at least 50 amino acids in length in a reagent-dispensing device having an elongate capillary channel adapted to hold a quantity of the reagent solution and having a tip region at which the solution in the channel forms a meniscus,

(b) tapping the tip of the dispensing device against a surface of a planar solid support at a defined position ~~on the surface~~, with an impulse effective to break the meniscus in the capillary channel and deposit a selected volume between 0.002 and 2 nl of solution on the surface of the planar solid support, and

(c) repeating steps (a) and (b) until said microarray is formed.

10. (Amended) A microarray of polypeptides of claim 31 produced by the method of:

(a) loading an aqueous solution of a selected polypeptide of at least 50 amino acids in length in a reagent-dispensing device having an elongate capillary channel adapted to hold a quantity of the reagent solution and having a tip region at which the solution in the channel forms a meniscus,

(b) tapping the tip of the dispensing device against a surface of a planar solid support at a defined position ~~on the surface~~, with an impulse effective to break the meniscus in the capillary channel and deposit a selected volume between 0.002 and 2 nl of solution on the surface of the planar solid support, and

(c) repeating steps (a) and (b) until said microarray is formed.

11. (Amended) The microarray of polypeptides according to Claim 910, wherein said microarray comprises 100 or more discrete regions of distinct polypeptide ~~strands~~ per cm² of solid support.

12. (Amended) The microarray of polypeptides according to Claim 910, wherein said microarray comprises 1000 or more discrete regions of distinct polypeptide ~~strands~~ per cm² of solid support.

13. (Amended) The microarray of polypeptides according to Claim 910, wherein said polypeptides are immunological receptors.

14. (Amended) The microarray of polypeptides according to Claim ~~11~~13, wherein said immunological receptors are antibodies.

15. (Amended) The microarray of polypeptides according to Claim 910, wherein said polypeptides are antigens.

16. (Amended) The microarray of polypeptides according to Claim 910, wherein said planar solid support comprises a cationic film which binds ~~capable of binding~~ said polypeptide.

18. (Amended) The microarray of polypeptides according to Claim 910, wherein said polypeptides retain the binding properties of the native polypeptide conferred by the three-dimensional structure.

19. (Amended) A method of simultaneously detecting the presence of multiple protein-binding ligands in a sample, the method comprising:

contacting said sample with a microarray of polypeptides, of claim 31; ~~wherein said microarray comprises 100 or more discrete regions of distinct polypeptide strands per cm² of solid planar support~~;
washing said support free of unbound sample; and
detecting the presence of bound ligands.

31. (New) A microarray of discrete polypeptides on a planar solid support, wherein each polypeptide is of at least 50 amino acids in length and wherein said microarray comprises 100 or more discrete regions of distinct polypeptide per cm^2 of planar solid support.

32. (New) The microarray of claim 31, wherein said microarray comprises 1000 or more discrete regions of distinct polypeptide per cm^2 of planar solid support.

33. (New) The microarray of polypeptides according to Claim 31, wherein said polypeptides are immunological receptors.

34. (New) The microarray of polypeptides according to Claim 33, wherein said immunological receptors are antibodies.

35. (New) The microarray of polypeptides according to Claim 31, wherein said polypeptides are antigens.

36. (New) The microarray of polypeptides according to Claim 31, wherein said planar solid support comprises a cationic film which binds said polypeptide.

37. (New) The microarray of polypeptides according to Claim 31, wherein said polypeptides retain the binding properties of the native polypeptide conferred by the three-dimensional structure.